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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,665	02/05/2004	Kosuke Yamaguchi	09812.0400-00000	5568
22852 7590 05/14/2007 FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER ZHOU, TING	
			ART UNIT 2173	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/772,665	Applicant(s) YAMAGUCHI ET AL.	
	Examiner Ting Zhou	Art Unit 2173	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02/05/2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. Claims 1-13 are pending in the application.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because it is longer than 150 words.

Correction is required. See MPEP § 608.01(b).

Drawings

3. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claim 13 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

MPEP 2106.01 reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claim 13 defines a program. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive

material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" - MPEP 2106.01). That is, the presently claimed program is merely software code, therefore, claim 13 is directed to software, per se, lacking any hardware to enable any functionality to be realized; software claimed by itself, without being executed or implemented on a computer medium, is non-statutory. Any amendment to the claim should be commensurate with its corresponding disclosure.

5. To expedite a complete examination of the instant application, the claims rejected under 35 U.S.C. 101 (nonstatutory) above are further rejected as set forth below in anticipation of the applicant amending these claims to place them within the four statutory categories of invention.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claim 1 recites the limitations "the case" and "*the icon train* displayed on the orbit" in lines 5 and 7-8 respectively. There is insufficient antecedent basis for this limitation in the claim.

- b. Claim 4 recites the limitation "the case" in line 1. There is insufficient antecedent basis for this limitation in the claim.
- c. Claim 5 recites the limitations "the case", "the one" and "*the icon train* displayed on the orbit" in lines 5, 6 and 7 respectively. There is insufficient antecedent basis for this limitation in the claim.
- d. Claim 8 recites the limitation "the case" in line 1. There is insufficient antecedent basis for this limitation in the claim.
- e. Claim 9 recites the limitations "the case" and "*the icon train* displayed on the orbit" in lines 7 and 9-10 respectively. There is insufficient antecedent basis for this limitation in the claim.
- f. Claim 12 recites the limitation "the case" in line 1. There is insufficient antecedent basis for this limitation in the claim.
- g. Claim 13 recites the limitations "the case" and "*the icon train* displayed on the orbit" in lines 6 and 8-9 respectively. There is insufficient antecedent basis for this limitation in the claim.
- h. Claims 2-3, 6-7 and 10-11 are dependent upon claims 1, 5 and 9 respectively, and are rejected for similar reasons.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 3, 5, 7, 9, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurtenbach U.S. Patent 5,926,178 and Tojo et al. U.S. Publication 2004/0250217 (hereinafter "Tojo").

Referring to claims 1, 5, 9 and 13, Kurtenbach teaches a system, method, electronic appliance and computer program comprising a display icon management means for managing the plurality of icons displayed on the orbit according to a numerical upper limit (displaying menu icons in a circular orbit as a marking menu; for example, as shown in Figure 6, up to the upper limit of 8 menu items are displayed in a circular orbit) (Kurtenbach: column 4, lines 53-59 and column 8, lines 31-33); a non-display icon management means for managing, in the case where one or more icons in excess of the upper limit are set selectable on the display screen, the one or more icons in excess as an invisible icon or icon train contiguous to the icon train displayed on the orbit (the additional, or overflow menu icons in excess of the eight menu items displayed in the circular orbit are displayed contiguous to, i.e. below the circular orbit in a linear portion) (Kurtenbach: column 4, lines 53-59 and Figure 6). However, although Kurtenbach teaches using information registered in the display and non-display icon management means for displaying an icon train (the menu icons that are frequently used are displayed in the circular orbit, while other menu items are displayed in a linear portion below the circular orbit) (Kurtenbach: column 4, lines 53-59 and Figure 6), Kurtenbach fails to explicitly teach an icon train display updating means for updating an icon train displayed on the orbit according to an external command on the basis of information registered in the display and non-display icon management means, respectively; and a visual-effect means for having an icon train displayed on the orbit disappear

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from the orbit with a visual-effect, and having an icon newly registered in the display icon management means appear on the orbit with a visual effect. Tojo teaches a graphical user interface that displays menu icons in a circular orbit (Tojo: Figures 11 and 18) similar to that of Kurtenbach. In addition, Tojo further teaches an icon train display updating means for updating an icon train displayed on the orbit according to an external command on the basis of information registered in the display management means (upon user input, the menu icons on the circular display are rotated to update the display) (Tojo: page 2, paragraphs 0039-0040 and further shown in Figures 4(a)-4(d)); and a visual-effect means for moving icons into and out of the display with a visual effect (for example, menu icons A-F can be visually moved to rotate between desired icons; furthermore, Figures 5(a) and 5(b) show that the menu icon "B" visually disappears while the new menu icon "K" visually appears on the display in response to corresponding user input indicating selection/rotation) (Tojo: page 2, paragraph 0039 – page 3, paragraph 0043 and page 3, paragraph 0045). It would have been obvious to one of ordinary skill in the art, having the teachings of Kurtenbach and Tojo before him at the time the invention was made, to modify the display of icons on the orbit and the display of icons in excess of the upper limit in an icon train contiguous to the orbit of Kurtenbach to include visually rotating icons into and out of the icon display, as taught by Tojo, in order to obtain an interface in which the display is updated via icons disappearing from the display while new icons appear on the display in response to an external user command. One would have been motivated to make such a combination in order to simplify the display, especially on a device with a small screen, such as a PDA or cell phone, making it easy to view, while still allowing the user to quickly and

efficiently find desired items (Tojo: page 1, paragraphs 0001 and 0003 and page 3, end of paragraph 0045).

Referring to claims 3, 7 and 11, Kurtenbach, as modified, teach wherein the icon train displayed on the orbit is updated by moving the icon train clockwise and/or counterclockwise along the orbit (menu items can be rotated clockwise, as shown from Figures 4(a) and 4(c), and/or counterclockwise, as shown from Figures 4(a) and 4(b) of Tojo).

Allowable Subject Matter

8. Claims 2, 4, 6, 8, 10 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: The present invention teaches the display of a plurality of icons movably on a visible circular orbit. Each of claims 2, 6 and 10 identify the distinct feature of forming a discontinuity in the circular orbit, and the visual-effect means has an icon newly registered in the non-display icon management means disappear at the discontinuity of the orbit with a visual effect, while having an icon newly registered in the display icon management means appear at the discontinuity of the orbit with a visual effect. The closest prior art, Kurtenbach U.S. Patent 5,926,178 and Tojo et al. U.S. Publication 2004/0250217 (hereinafter "Tojo") teach an interface in which the display is updated via icons disappearing from the display while new icons appear on the display in response to an external user command. In the case of the Kurtenbach reference, Kurtenbach

teaches a display icon management means for managing the plurality of icons displayed on the orbit according to a numerical upper limit (displaying menu icons in a circular orbit as a marking menu; for example, as shown in Figure 6, up to the upper limit of 8 menu items are displayed in a circular orbit) (Kurtenbach: column 4, lines 53-59 and column 8, lines 31-33); a non-display icon management means for managing, in the case where one or more icons in excess of the upper limit are set selectable on the display screen, the one or more icons in excess as an invisible icon or icon train contiguous to the icon train displayed on the orbit (the additional, or overflow menu icons in excess of the eight menu items displayed in the circular orbit are displayed contiguous to, i.e. below the circular orbit in a linear portion) (Kurtenbach: column 4, lines 53-59 and Figure 6). In the case of the Tojo reference, Tojo teaches an icon train display updating means for updating an icon train displayed on the orbit according to an external command on the basis of information registered in the display management means (upon user input, the menu icons on the circular display is rotated to update the display) (Tojo: page 2, paragraphs 0039-0040 and further shown in Figures 4(a)-4(d)); and a visual-effect means for moving icons into and out of the display with a visual effect (for example, menu icons A-F can be visually moved to rotate between desired icons; furthermore, Figures 5(a) and 5(b) show that the menu icon "B" visually disappears while the new menu icon "K" visually appears on the display in response to corresponding user input indicating selection/rotation) (Tojo: page 2, paragraph 0039 – page 3, paragraph 0043 and page 3, paragraph 0045). The prior art fail to teach the visual-effect means has an icon newly registered in the non-display icon management means disappear at a discontinuity formed in the orbit with a visual effect, while having an icon newly registered in the display icon management means appear at the discontinuity of the orbit

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with a visual effect. Therefore, the prior art fail to anticipate or render the above limitations obvious. Claims 4, 8 and 12 depend upon claims 2, 6 and 10 respectively, and are allowable subject matter for similar reasons.

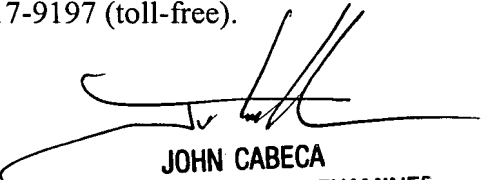
10. The prior art made of record on form PTO-892 and not relied upon is considered pertinent to applicant's disclosure. Applicant is required under 37 C.F.R. § 1.111(c) to consider these references fully when responding to this action. The documents cited therein teach similar methods of displaying menus in a circular orbit.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ting Zhou whose telephone number is (571) 272-4058. The examiner can normally be reached on Monday - Friday 7:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cabeca can be reached at (571) 272-4048. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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